WHAT IS CLAIMED IS:

1. An alkaline battery comprising:

a cathode comprising an additive, the additive including a barium salt and an electrically conductive material, and a manganese dioxide;

an anode comprising zinc;

a separator between the cathode and the anode; and

an alkaline electrolyte in contact with the cathode and the anode.

2. The battery of claim 1, wherein the electrically conductive material is coated on a surface of the barium salt.

3. The battery of claim 1, wherein the electrically conductive material includes a metal oxide.

4. The battery of claim 2, wherein the electrically conductive material includes a metal oxide.

5. The battery of claim 3, wherein the metal oxide is a tin oxide.

6. The battery of claim 4, wherein the metal oxide is a tin oxide.

7. The battery of claim 1, wherein the barium salt includes barium sulfate, barium hydroxide, barium carbonate, or barium oxide.

8. The battery of claim 1, wherein the manganese dioxide is an electrolytic manganese dioxide.

9. The battery of claim 1, wherein the service life of the battery in an intermittent discharge test is at least 2% longer than the service life of a battery lacking the particle.

10. The battery of claim 1, wherein the service life of the battery in an intermittent discharge test is at least 3% longer than the service life of a battery lacking the particle.

11. An alkaline battery comprising:

a cathode comprising an additive, the additive including a barium salt and a coating

on a surface of the barium salt, and a manganese dioxide;

an anode comprising zinc;

a separator between the cathode and the anode; and

an alkaline electrolyte in contact with the cathode and the anode.

12. The battery of claim 11, wherein the coating is electrically conductive.

13. The battery of claim 12, wherein the coating includes a metal oxide.

14. The battery of claim 13, wherein the metal oxide is a tin oxide.

15. The battery of claim 11, wherein the barium salt includes barium sulfate, barium hydroxide, barium carbonate, or barium oxide.

16. The battery of claim 11, wherein the manganese dioxide is an electrolytic manganese dioxide.

17. The battery of claim 11, wherein the service life of the battery in an intermittent discharge test is at least 2% longer than the service life of a battery lacking the particle.

18. The battery of claim 11, wherein the service life of the battery in an intermittent discharge test is at least 3% longer than the service life of a battery lacking the particle.

19. A method of manufacturing an alkaline battery comprising forming a cathode including a cathode active material including a manganese dioxide, and an additive including a barium salt and an electrically conductive material.

20. The method of claim 19, wherein the electrically conductive material is coated on a surface of the barium salt.

21. The method of claim 19, wherein the electrically conductive material includes a metal oxide.

22. The method of claim 20, wherein the electrically conductive material includes a metal oxide.

23. The method of claim 21, wherein the metal oxide is a tin oxide.

24. The method of claim 22, wherein the metal oxide is a tin oxide.

25. The method of claim 19, wherein the barium salt includes barium sulfate, barium hydroxide, barium carbonate, or barium oxide.

26. The method of claim 19, wherein the manganese dioxide is an electrolytic manganese dioxide.

27. The method of claim 19, further comprising assembling the cathode with an anode, a separator, and an electrolyte in a housing.

28. A method of making an alkaline battery comprising:

combining an additive, the additive including a barium salt and a coating on a surface of the barium salt, with a cathode active material including a manganese dioxide.

29. The method of claim 28, wherein the coating is electrically conductive.

30. The method of claim 29, wherein the coating includes a metal oxide.

31. The method of claim 30, wherein the metal oxide is a tin oxide.

32. The method of claim 28, wherein the barium salt includes barium sulfate, barium hydroxide, barium carbonate, or barium oxide.

33. The method of claim 28, wherein the manganese dioxide is an electrolytic manganese dioxide.

34. The method of claim 28, further comprising assembling the cathode with an anode, a separator, and an electrolyte in a housing.

35. A method of increasing the service life of an alkaline battery comprising adding an additive, the additive including a barium salt and a coating on a surface of the barium salt, to a cathode active material including a manganese dioxide.

36. The method of claim 35, wherein the coating is electrically conductive.

37. The method of claim 35, wherein the coating includes a metal oxide.

38. The method of claim 37, wherein the metal oxide is a tin oxide.

39. The method of claim 35, wherein the barium salt includes barium sulfate, barium hydroxide, or barium oxide.

40. The method of claim 35, wherein the manganese dioxide is an electrolytic manganese dioxide.

41. The method of claim 35, wherein the service life of the battery in an intermittent discharge test is at least 2% longer than the service life of a battery lacking the particle.

42. The method of claim 35, wherein the service life of the battery in an intermittent discharge test is at least 3% longer than the service life of a battery lacking the particle.